1. CHEMICAL PRODUCT/COMPANY IDENTIFICATION

Name: MS-122ADX
PTFE Release Agent/Dry Lubricant

Product Use: Release Agent or Dry Lubricant

MANUFACTURER/DISTRIBUTOR:

Miller-Stephenson Chemical
55 Backus Ave.
Danbury, Conn. 06810 USA
(203) 743-4447

Emergency Phone Number:
(800) 424-9300

2. HAZARDS IDENTIFICATION

Physical Hazard:
Aerosols: Category 1
Gases under pressure – Liquefied Gas

Label elements:

Single Word: Danger

Hazard Statements
H222 Extremely flammable aerosol
H280 Contains gas under pressure; may explode if heated.

Precautionary Statements:
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P211 Do not spray on open flame or other ignition source.
P251 Do not pierce or burn, even after use.
P410+P412 Protect from sunlight. Do not expose to temperature exceeding 50°C/122°F.
P501 Dispose of contents/container to an approved waste disposal plant.

Other hazards which do not result in classification or are not covered by GHS
Vapors are heavier than air and can cause suffocation by reducing oxygen available for breathing.
Misuse or intentional inhalation abuse may cause death without warning symptoms, due to cardiac effects.
The thermal decomposition vapors of fluorinated polymers may cause polymer fume fever with flu-like symptoms in humans, especially when smoking contaminated tobacco.

3. INGREDIENTS

Material (s)	CAS No.	Approximate %
Propane	74-98-6	57 - 58
n-Butane	106-97-8	27 - 28
Isopropyl Alcohol	67-63-0	12 - 15

4. FIRST AID MEASURES

Inhalation: Remove to fresh air. Get medical attention.

Eye: Immediately flush eyes with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Continue to rinse. Get medical attention.

Skin: Immediately flush skin with plenty of water. Remove contaminated clothing and shoes. Wash clothing before use. Thoroughly clean shoes before reuse. Get medical attention.

Oral: DO NOT induce vomiting. Get medical attention. Rinse mouth thoroughly with water. Never give anything by mouth to an unconscious person.

Most important symptoms and effects, both acute and delayed: Inhalation may provoke the following symptoms: Polymer fume fever. Eye contact may provoke the following symptoms: Irritation Causes serious eye irritation. May cause drowsiness or dizziness.

Notes to Physician:
Because of possible disturbances of cardiac rhythm, catecholamine drugs, such as epinephrine, that may be used in situations of emergency life support should be used with special caution.

5. FIRE FIGHTING MEASURES

Flammability: Extremely flammable aerosol

Fire and Explosion: Extremely flammable. Contents under pressure. Material can ignite by heat, sparks, flames, or other sources of ignition. The vapor is heavier than air and will travel considerable distances to a source of ignition where they can ignite, flash back, or explode.

Extinguishing Media: Water mist, Foam, Dry chemical, Carbon dioxide (CO2)

Specific hazards during firefighting: Exposure to combustion products may be a hazard to health. Aerosols will explode under fire conditions due to the heat and high pressure.

Hazardous combustion products: Carbon oxides, Hydrogen fluoride, Carbonyl fluoride, Potentially toxic fluorinated compounds.

Special Fire Fighting Instruction: Evacuate area. Keep unauthorized personnel out. Use water spray to cool aerosols if can be done safely. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. Do not breathe fumes or vapors from fire. Self-contained breathing apparatus (SCBA) may be required if a large amount of aerosols rupture under fire conditions. Fight fire from a distance, heat may rupture containers.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment, and emergency procedures: Extremely flammable aerosol. Evacuate personnel to safe area. Use personal protective equipment. Ventilate area. In case of insufficient ventilation, wear suitable respiratory equipment. If a large amount of aerosols rupture this will create a fire hazard and may form an explosive atmosphere. Keep away from all sources of ignition and hot metal surfaces if safe to do so.

Environmental precautions: Avoid release to the environment. Prevent material from entering sewers, waterways, or low areas. Do not allow contact with soil, surface, or ground water. Local authorities should be advised if significant spillages cannot be contained.

Methods and material for containment and cleaning up: Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations.

7. HANDLING AND STORAGE

Handling: If sufficient ventilation is unavailable, use local exhaust ventilation. Use only in an area equipped with explosion-proof exhaust ventilation, if advised by assessment of the local exposure potential. Keep away from heat and sources of ignition. Take precautionary measures against static discharges. Do not eat, drink, or smoke. Do not swallow. Avoid contact with skin, eyes, or clothing. Wash thoroughly after handling.

Storage Conditions: Store in a clean, dry place that is well-ventilated. Do not store near sources of heat, in direct sunlight or where temperatures exceed 122^{O}F/50^{O}C. Do not pierce or burn, even after use.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Limits:	**ACGIH**	**OSHA**
Propane	Simple Asphyxiant	1000 ppm, TWA
n-Butane	1000 ppm, STEL	Not Established
Isopropyl Alcohol	200 ppm , TWA	400 ppm, TWA

Respiratory Protection: General and local exhaust ventilation is recommended to maintain vapor exposures below recommended limits. Where concentrations are above recommended limits or are unknown, appropriate respiratory protection should be worn. Follow OSHA respirator regulations (29 CFR 1910.134) and use NIOSH/MSHA approved respirators. Protection provided by air purifying respirators against exposure to any hazardous chemical is limited. Use a positive pressure air supplied respirator if there is any potential for uncontrolled release, exposure levels are unknown, or any other circumstance where air purifying respirators may not provide adequate protection.

Eye Protection: Avoid eye contact. Use chemical goggles or safety glasses with side shields. Depending on the conditions of use, a face shield may be necessary.

Skin Protection: Avoid contact with skin. Use impervious gloves. Wash hands before breaks and at the end of workday. Breakthrough time is not determined for the product. Change gloves often.

Prevention of Swallowing: Do not eat, drink or smoke when using this product. Wash hands thoroughly after contact.

9. PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point: Not Applicable

Density: 0.60 g/cc at 77°F/25°C

Vapor Density (Air=1): >1

pH Information: Neutral

Form: Aerosol

Color: White

Percent Volatile by Volume: 98%

Vapor Pressure: 85 psig at 77°F/25°C

Solubility in H_2O : Insoluble

Evaporation Rate (CC14=1): Not available

Appearance: Milky

Odor: Faint Alcohol Odor

10. STABILITY AND REACTIVITY

Reactivity: Not classified as a reactivity hazard.

Chemical Stability: Stable at normal conditions.

Material and Conditions to Avoid: Heat, sparks and flame. Oxidizing agents.

Decomposition: This product can be decomposed by high temperatures (flame, glowing metal surfaces, etc.) forming Hydrogen fluoride, Carbonyl difluoride, Carbon oxides and hydrocarbon vapors.

11. TOXICOLOGICAL INFORMATION

Isopropyl Alcohol

Acute Toxicity
Oral: LD50, Rat, > 5,000 mg/kg
Dermal: LD50, Rat, > 5,000 mg/kg
Inhalation: LC50, 6 h, Vapor, Rat, > 25 mg/l
Skin Corrosion/Irritation: No skin irritation in rabbits.
Serious Eye Damage/Irritation: Irritation to eyes in Rabbits, reversing within 21 days.
Skin Sensitization: Test Type: Buehler Test. Routes of exposure: Skin contact. Species: Guinea pig. Method: OECD Test Guideline 406. Result: negative
Respiratory Sensitization: Not classified based on available information.
Germ Cell Mutagenicity: In vitro and In vivo - Not Mutagenic
Carcinogenicity: Species: Rat. Application Route: inhalation (vapor). Exposure time: 104 weeks. Method: OECD Test Guideline 451. Result: negative
Reproductive Toxicity: Test Type: Two-generation reproduction toxicity study. Species: Rat. Application Route: Ingestion. Result: negative effects on fertility. Test Type: Embryo-fetal development. Species: Rat. Application Route: Ingestion. Result: negative effects on fetal development
STOT- single exposure: May cause drowsiness or dizziness.
Repeated dose toxicity: NOAEL: 12.5 mg/l. Species: Rat. Application Route: inhalation (vapor). Exposure time: 104 weeks.
Aspiration toxicity: Not classified based on available information.

12. ECOLOGICAL INFORMATION

Isopropyl Alcohol

Toxicity to fish: 96 hour LC50 in Pimephales promelas (fathead minnow): 9,640 mg/l
Toxicity to daphnia and other aquatic invertebrates: 24 hour EC50 in Daphnia magna (water flea): >10,000 mg/l
Toxicity to microorganisms: 16 hour EC50 in Pseudomonas putida: >1,050 mg/l
Persistence and degradability: Rapidly degradable. BOD: 1.19 (BOD5)COD: 2.23BOD/COD: 53%
Bioaccumlative potential: Partition coefficient: n-octanol/water: log Pow: 0.05
Mobility in soil: No data available.

13. DISPOSAL CONSIDERATIONS

Comply with federal, state and local regulations. Remove to a permitted waste disposal facility. Do not puncture or incinerate cans. Empty aerosol cans before disposal.

14. TRANSPORT INFORMATION

U.S. DOT
Limited Quantity

IATA
Proper Shipping Name: Aerosols, Flammable
Hazard Class: 2.1
Identification No. UN1950
Packing Group: None

IMDG
Proper Shipping Name: Aerosols, Flammable
Hazard Class: 2.1
Identification No. UN1950
Packing Group: None

15. REGULATORY INFORMATION

U.S. Federal Regulations

TSCA: All ingredients are listed in TSCA inventory.

SARA 304 Extremely Hazardous Substances Reportable Quantity: This material does not contain any components with a section 304 EHS RQ.

SARA 302 Extremely Hazardous Substances Threshold Planning Quantity: This material does not contain any components with a section 302 EHS TPQ.

SARA 311/312 Hazards: Extremely flammable aerosol.

SARA 313: This product contains the following toxic chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 (40CFR 372). They may not be intentionally present in the product; however, it is possible that they may be present as an impurity and the exact concentration may vary between batches:
3,3,4,4,5,5,6,6,7,7,8,8,8-Tridecafluorooctanesulphonic acid, CAS No.: 27619-97-2, < 18 ppb
Perfluorobutanoic acid, CAS No.: 375-22-4, < 0.5 ppb
Perfluorohexanoic acid, CAS No.: 307-24-4, < 0.7 ppb
Perfluorononanoic acid, CAS No.: 375-95-1, < 0.9 ppb
Perfluorododecanoic acid, CAS No.: 307-55-1, < 1.1 ppb
Perfluorodecanoic acid, CAS No.: 335-76-2, < 1.2 ppb
Perfluorooctanoic acid, CAS No.: 335-67-1, < 2 ppb

U.S. State Regulations:

California Prop. 65
WARNING: This product can expose you to chemicals including 2,2'-Iminodiethanol, which is/are known to the State of California to cause cancer, and Carbon monoxide, which is/are known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov. Note to User: This product is not made with PFOA nor is PFOA intentionally present in the product; however, it is possible that PFOA may be present as an impurity at background (environmental) levels.

16. OTHER INFORMATION

FOR INDUSTRIAL USE ONLY

REVISION DATE: January 29, 2025

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text. Final determination of suitability of any material is the sole responsibility of the user.